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11 **STATE OF CALIFORNIA**
12 **NATURAL RESOURCES AGENCY**
13 **DEPARTMENT OF CONSERVATION**
14 **DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES**
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17 ***AMENDED* EMERGENCY ORDER TO**
18 **IMMEDIATELY CEASE INJECTION OPERATIONS**

19 **NO. 1055 (amended)**

20 **Original Dated: Wednesday, July 2, 2014**

21 **This Amended Order dated July 11, 2014**

22 **Operators: Longbow, LLC**

23 **Well(s): 02966045 and ~~03046608~~**
24

25
26 **BY**

27 **Steven R. Bohlen**

28 **STATE OIL AND GAS SUPERVISOR**

INTRODUCTION

1. The Division of Oil, Gas, and Geothermal Resources (Division) has determined that an emergency exists in connection with underground injection operations for the well operated by Longbow, LLC, identified as API no. 02966045 and ~~03046608~~ (hereinafter “the wells subject to this order”). Injection into this wells poses danger to life, health, property, and natural resources. Therefore, under the authority of Public Resources Code sections 3106, 3222, 3224, 3225, 3226, and 3235, and California Code of Regulations, title 14, sections 1724.6, 1724.7, 1724.10, the State Oil and Gas Supervisor (Supervisor) is ordering that injection into the well subject to this amended order immediately cease as specified below. The Division is working cooperatively with the Central Valley Regional Water Quality Control Board, (which is contemporaneously issuing its own order pursuant to California Water Code section 13267), and the State Water Resources Control Board to obtain information for use in evaluating, preserving and protecting underground water suitable for irrigation or domestic purposes.

1(a). This amendment to Order 1055 reflects the removal of the well known as “Tejon Ranch 24,” API number 03046608, from the scope of the original Order 1055. A review of pertinent Division records reveals that well 03046608 is injecting into the Santa Margarita formation which, in the Comanche Point field, is an exempt aquifer, warranting this amendment to remove well 03046608 from the scope of the original order. This amendment to the original order does not affect the terms of the original order as to well 02966045.

2. This amended order constitutes written notice from the Division to immediately stop injection in the well subject to this amended order, pursuant to California Code of Regulations, title 14, section 1724.10, subdivision (h).

STATUTORY and RELATED AUTHORITY

3. Pursuant to Public Resources Code section 3106, the Supervisor shall supervise the operation of wells in this State so as to prevent, as far as possible, damage to life, health, property, and natural resources, and to prevent damage to underground waters suitable for irrigation and domestic purposes by the infiltration of, or the addition of, detrimental substances.

1 4. Pursuant to Public Resources Code sections 3222, 3224, 3225, 3226, 3235, and other
2 authorities, the Supervisor has a duty to, and may take action to, prevent the infiltration of detrimental
3 substances into underground water potentially suitable for irrigation or domestic purposes. Pursuant to
4 these statutes and authorities, the Supervisor may order tests to be performed, remedial action(s) to be
5 taken, and the preparation of reports regarding such tests and/or remedial action(s).

6 5. Pursuant to Title 14, California Code of Regulations, sections 1724.6, 1724.7, 1724.10, and
7 other authorities, the Division possesses authority to approve and evaluate Underground Injection and
8 Disposal projects, and to require that data be submitted in connection therewith.

9 6. Pursuant to Title 40, Code of Federal Regulations, section 146.4, and other authorities, only
10 properly designated aquifers may receive injected fluids in connection with underground injection
11 operations.

12 7. Pursuant to Title 14, California Code of Regulations, section 1724.10, subdivision (h),
13 underground injection operations shall be stopped upon written notice from the Division.

14 15 **FACTS**

16 8. The well(s) subject to this amended order are under the permitting authority of the Supervisor
17 and/or Division pursuant to Public Resources Code section 3106, and Title 14, California Code of
18 Regulations section 1724.6.

19 9. Such permitting authority is also contemplated by the federal Safe Drinking Water Act and its
20 implementing regulations. Effective March 14, 1983, California's Division of Oil, Gas and Geothermal
21 Resources (Division) was granted primacy by the United States Environmental Protection Agency (US
22 EPA) to carry out the terms of an Underground Injection Control Program, pursuant to section 1425 of
23 the Safe Drinking Water Act (codified at 42 U.S.C. § 300f et seq.). (48 Fed. Register 6336, Feb. 11,
24 1983.)

25 10. Contemporaneously with the granting of primacy to the Division, and on occasion
26 thereafter, certain underground aquifers within the State were designated as "exempted aquifers." (40
27 CFR, § 146.3.) This designation qualifies such aquifers as appropriate for the injection of fluids
28 attendant to or produced by oil and gas extraction activities and depends upon, among other things, the

1 presence of sufficient hydrocarbons and sufficient number of parts per million (ppm) of total dissolved
2 solids (TDS) in the receiving aquifer. (40 CFR, section 146.4.)

3 11. As a result of the granting of primacy, the Division, pursuant to Title 14, California Code of
4 Regulations sections 1724.6, 1724.7, and 1724.10, must approve any subsurface injection or disposal
5 activities based on pertinent and necessary data submitted to the Division.

6 12. The Division has become aware that certain underground injection activities are occurring
7 into non-exempted aquifers.

8 13. Based on information and belief, the Division has determined that the well(s) subject to this
9 amended order are injecting into one or more non-exempt aquifers which:

10 (a) May contain underground water suitable for irrigation or domestic purposes;

11 (b) May contain water with less than 3,000 ppm total dissolved solids;

12 (c) May have been specifically denied exempted aquifer status by the US EPA in connection
13 with the Division's application for primacy;

14 (d) May not have been hydrocarbon-bearing at the time injection commenced; and

15 (e) May be potential underground sources of drinking water.

16 14. In order to prevent the infiltration of detrimental substances into underground water suitable
17 for irrigation or domestic purposes, the Supervisor relies on the above-referenced legal authorities and
18 factual allegations, and makes the orders set forth below.

20 ORDERS

21 15. Based on the facts, circumstances, and authorities described herein, on information and
22 belief, and pursuant to the Supervisor's duties set forth in Public Resources Codes section 3106,
23 pursuant to Public Resources Code section 3222, 3224, 3225, 3226, and 3235 the Supervisor has
24 determined that an emergency exists and that immediate action(s) are necessary to protect life, health,
25 property, and natural resources, specifically, the further degradation of the affected aquifers, and orders
26 as follows:

27 I. Cease and Desist Injection Operations

16. The operator subject to this amended order will cease all injection operations into the well(s) subject to this amended order on or before 12:00 Noon on Monday, July 7, 2014 unless the operator subject to this amended order provides the Division with documentary evidence generated by the United States Environmental Protection Agency, satisfactory to the Supervisor, specifically establishing that the aquifer(s) affected by the wells subject to this amended order are "exempted aquifers" as defined in Title 40, Code of Federal Regulations, sections 146.3, consistent with Title 40, Code of Federal Regulations section 144.1, subdivisions (e)-(g), and the Safe Drinking Water Act. In the event the operator subject to this amended order makes such a submission of evidence, the operator will nevertheless cease any and all injection operations into the wells subject to this amended order on or before 12:00 Noon on Monday, July 7, 2014 unless the Supervisor notifies the operator in writing (1) that the documentary evidence provided is sufficient to establish that the aquifer receiving injection is an exempted aquifer under the authorities stated above, and (2) that resumption of injection is approved on that basis.

II. Alternative Disposal or Injection

17. In the event that production activities relying on the use of any well subject to this amended order are continued using an alternative method of disposal of fluid, or an alternative location of underground injection, such alternative disposal or injection method or location shall be utilized only pursuant to, as applicable, (a) any applicable waste discharge requirements or NPDES permit issued by the Central Valley Regional Water Quality Control Board; (b) an existing permit for Underground Injection into an "exempted aquifer" consistent with Title 40, Code of Federal Regulations, section 146.3, updated to reflect the addition of the new injectate as required by Title 14 of the California Code of Regulations, section 1724.10, subdivision (d); or (c) other means carried out in full compliance with any required laws or regulations.

III. Written Approval Required

18. Injection operations shall not resume into the well(s) subject to this amended order except on the express written approval of the Supervisor.

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2 **IV. Provide Information**

3 19. The operator subject to this amended order will provide the following information to the
4 State Oil and Gas Supervisor, in compliance with the truthful and accurate reporting requirement of
5 Public Resources Code section 3236, **within 30 days of the date of this amended order:**

6 (a) For each well subject to this amended order, any and all information compiled or
7 maintained, whether or not previously submitted to the Division, in compliance with Title 14,
8 California Code of Regulations, section 1724.7. The information submitted in response to this
9 aspect of this order shall include, but not be limited to, the categories of information listed in
10 Exhibit A attached hereto;

11 (b) For each well subject to this amended order, the total volume of injected fluid for
12 each month of operation, for all years of operation, any periodic chemical analyses of the
13 fluid(s) being injected, and any amendments to the original project approval, as provided by
14 Division reporting requirements;

15 (c) For each well subject to this amended order, a technical report with an analysis
16 of a representative sample of the fluid being injected, in accordance with the water quality
17 analysis and reporting requirements contained in Exhibit B to this order;

18 (d) For each well subject to this amended order, any and all data maintained in
19 compliance with Title 14, California Code of Regulations, section 1724.10, subd. (h);

20 (e) For each well subject to this amended order, the dates of, and documentation
21 associated with, each mechanical integrity test undertaken to comply with Title 14, California
22 Code of Regulations, section 1724.10, subd. (j);

23 (f) For each well subject to this amended order, please also send copies of all of the
24 data required in items (a) through (e) above to
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26
27 Central Valley Water Board
28 Attn. Dane Johnson
1685 E Street
Fresno, CA 93706

Operator's Appeal Rights

20. This order may be appealed by filing a written statement with the State Oil and Gas Supervisor or district deputy that the order is not acceptable within ten (10) days of service of the order. This is an emergency order issued pursuant to Public Resources Code section 3226 and therefore, pursuant to Public Resources Code section 3350, subdivision (b), the filing of an appeal of this emergency order shall not operate as a stay of the order.

DATE

July 11, 2014

By



Steven R. Bohlen
State Oil and Gas Supervisor

Exhibit A

Paragraph 19(a) of this order requires submission of the categories of information listed below. Specifically, your submission will include the following in spreadsheet form, labeled with the capital letters indicated, with attachments containing the backup documentation indicated in items Q through S, inclusive:

- A. The name of the owner and/or operator of the injection well;
- B. American Petroleum Institute (API) number for the injection well;
- C. Injection well name and number;
- D. Name of the field in which the well is located;
- E. County in which the well is located;
- F. Latitude and Longitude (decimal degrees) of well head location;
- G. Latitude and Longitude Datum, indicate "1" for North American Datum of 1983 or "2" for North American Datum of 1927;
- H. Injection well total depth (feet);
- I. Top injection depth (feet);
- J. Formation/Zone name at top injection depth;
- K. Bottom injection depth (feet);
- L. Formation/Zone name at bottom injection depth;
- M. Date injection started in the well (Day/Month/Year, xx/xx/xxxx);
- N. Identify and describe all sources of fluid injected into the well;
- O. Injection volume in barrels for the period from 1 June 2013 through 31 May 2014;
- P. Total injection volume in barrels from the date injection in the well began through 31 May 2014;
- Q. Attach well construction diagram including all perforations, annular material, and seals;
- R. Attach copies of all available water quality lab analyses and/or reports of the injected fluids;
- S. Attach a calculation of the average water quality of injected fluid from the date injection began through 31 May 2014;

Exhibit B

Paragraph 19(c) of this order requires a technical report with an analysis of a representative sample of the fluid being injected into the well(s) subject to this order. Such sampling and reporting will reflect the following:

Sampling

Injection fluid samples shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program, using current applicable EPA-approved analytical methods for water for the following:

- A. Total dissolved solids
- B. Metals listed in California Code of Regulations, title 22, section 66261.24, subdivision (a)(2)(A)
- C. Benzene, toluene, ethylbenzene, and xylenes
- D. Total petroleum hydrocarbons for crude oil
- E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene)
- F. Radionuclides listed under California Code of Regulations, title 22, Table 64442
- G. Methane
- H. Major and minor cations (including sodium, potassium, magnesium, and calcium)
- I. Major and minor anions (including nitrate, chloride, sulfate, alkalinity, and bromide)
- J. Trace elements (including lithium, strontium, boron, iron, and manganese)

Water Quality Reporting

Water quality information shall be submitted in a technical report that includes, at a minimum:

- A. Site plan with location(s) of representative sample(s).
- B. Description of field sampling procedures.
- C. Table(s) of analytical results organized by well number (including API number).
- D. Copies of analytical laboratory reports, including quality assurance/quality control procedures and analytical test methods.
- E. Waste management and disposal procedures.

